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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/945,031	08/31/2001	Lawrence A. Booth JR.	INTL-0617-US (P11948)	1681

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EXAMINER	
WU, XIAO MIN	
ART UNIT	**PAPER NUMBER**
2674	

DATE MAILED: 05/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/945,031	BOOTH ET AL.	
	Examiner	Art Unit	
	XIAO M. WU	2674	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 April 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-7,9-12 and 14-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-7,9-12 and 14-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/15/2005 has been entered.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-2, 4-7, 9-12, 14-16 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima et al. (US Patent No. 6,313,816) in view of Feldman (US Patent No. 6,501,230).

As to claims 1, 6, 11, 16, Kojima discloses a method comprising: repeatedly determining a color gamut (Ar1, Ag1, Ab1, Fig. 4) that a substantial portion of the sub-pixels (e.g. red, green, blue) of an expressed color of light emitting device display (e.g. LED) are able to achieve; and adjusting the drive current (18, 20, Fig. 3) to the sub-pixels to achieve that color gamut (Ar2, Ag2, Ab2, Fig. 4). For example, the gamut correction range (Ar2, Ag2, Ab2, Fig. 4) is repeatedly determined based on the sequential input color data. Kojima further discloses a processor (17, Fig. 3) and storage ((20). Kojima also discloses using luminance correction and chromaticity correction circuit (14, 17, 16, 20, 21) to correct the variation in luminous intensity and chromaticity due to a variation in characteristics of the LEDs..

It is noted that Kojima does not specifically disclose that the LED is an organic LED and does not specifically discloses that the determination is over the life time of the organic light emitting device display such as that the variation of the intensity and color balance is due to the age of the OLEDs . However, correct the intensity variation of the organic LEDs with age problem is well known in the art such as taught by Feldman. For example, Feldman discloses a correction circuit for correcting the color balance of the organic light emitting device display over the lifetime of the OLED repeatedly (e.g. continuously to correct the age problem of the OLED). It would have been obvious to one of ordinary skill in the art to have modified Kojima's correction circuit with the age correction circuit as taught by Feldman so as to maintain the gamut substantially constant over the lifetime of the display.

As to claims 2, 7, 12, 21, Kojima discloses determining a color gamut that all of the subpixels of an expressed color gamut (e.g. Ar1, Ag1, Ab1) can achieve and adjusting the device current to achieve that color gamut (see Fig. 4).

As to claims 4, 9, 14, Kojima discloses maintaining the gamut substantially constant by mixing a first or second subpixel color with an expressed color pixel to adjust the color of the expressed color pixel (col. 7, lines 28-32).

As to claims 5, 10, 15, Kojima discloses mixing colors of the tricolor space to achieve the color gamut (col. 7, lines 45-66).

4. Claims 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima et al. (US Patent No. 6,313,816) in view of Feldman (US Patent No. 6,501,230) as applied to claim 16 above, and further in view of Adler (US Patent No. 5,532,550).

As to claim 17, it is noted that both Kojima and Feldman does not specifically disclose the sub-pixels include conjugated polymers. Adler is cited to teach an organic LED display device including the sub-pixels include conjugated polymers (16, Fig. 4). It would have been obvious to one of ordinary skill in the art to have modified Kojima as modified with the structure of the organic LED as taught by Adler because Adler provide low resistance conductor and line conductors at a plurality of points (col. 3, lines25-32).

As to claim 18, Adler discloses the sub-pixels include a polymer film (16).

As to claim 19, Adler discloses the display includes sub-pixels in the forms of a stacked layer (17, 18, 19, Fig. 4).

As to claim 20, Adler discloses a substrate wherein the sub-pixels are distributed side-by-side across the substrate (12a, 12b, Fig. 4).

Response to Arguments

5. Applicant's arguments filed 4/15/2005 have been fully considered but they are not persuasive. Applicant argues that Kojima does not discloses determining whether substantially

all of the pixels can achieved a given gamut , and but, most certainly, there is nothing about doing this in a repeated basis. Applicant's arguments are not persuasive. Kojima clearly discloses that the light emission wavelength is corrected **every pixel** and as a method of correcting the color variation occurring due to the variation in light emission wavelength, a chromaticity converting function is provided **every pixel** (col. 4, lines 16-26). Furthermore, the gamut correction of Kojima is repeatedly determined based on the continuous input data. Also, the secondary reference to Feldman further discloses that the OLED is repeatedly corrected in different OLED ages. It is believed that the broadly claimed structures are still met by the prior art references to Kojima and Feldman.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to XIAO M. WU whose telephone number is 571 272-7761. The examiner can normally be reached on 6:30 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, PATRICK EDOUARD, can be reached on 571 272-7603. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

x.w.
April 29, 2005

XIAO M. WU
Primary Examiner
Art Unit 2674